

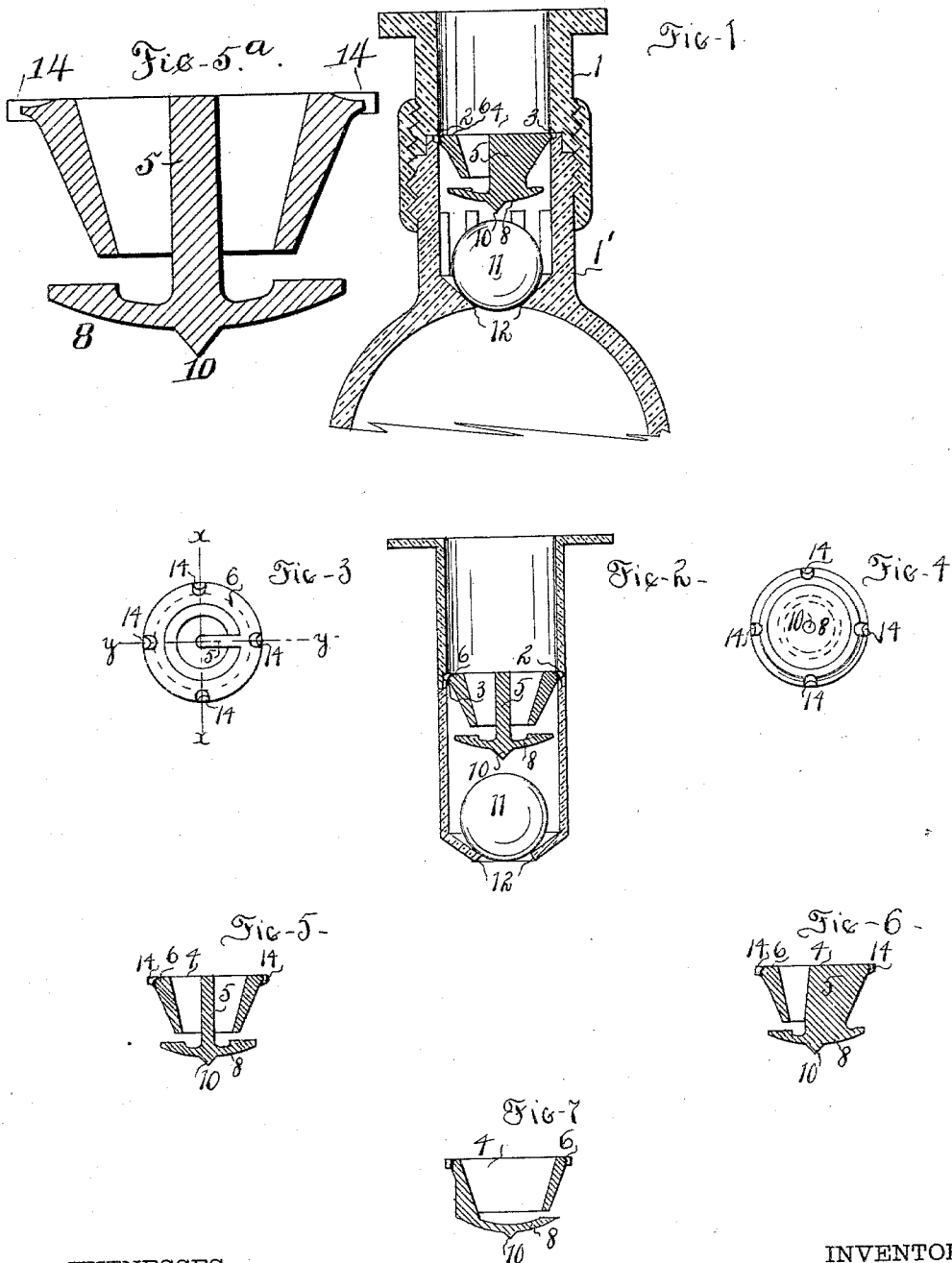
(No Model.)

W. H. PAYNE.

DEVICE FOR PREVENTING BOTTLE REFILLING.

No. 566,721.

Patented Aug. 25, 1896.



WITNESSES:

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DEVICE FOR PREVENTING BOTTLE-REFILLING.

SPECIFICATION forming part of Letters Patent No. 566,721, dated August 25, 1896.

Application filed May 25, 1895. Serial No. 550,688. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. PAYNE, a citizen of the United States, residing at Camden, in the county of Camden and State of New Jersey, have invented certain new and useful Improvements in Devices to Prevent the Clandestine Refilling of Bottles; and I do hereby declare the following to be a sufficiently full, clear, and exact description thereof as to enable others skilled in the art to make and use the said invention.

This invention relates to the protection of bottles against clandestine refilling; and it consists in an improvement upon the device for which United States Letters Patent numbered 537,712 were granted to me on the 16th of April, 1895; and it consists in an improved form of guard to prevent access to the valve, and in an improved mode of guiding and governing the motion of the valve to render the automatic closing thereof more certain and effectual.

The following is a detailed description of this improvement, reference being had to the accompanying drawings, in which—

Figure 1 shows a vertical section of a bottle-neck containing this invention. Fig. 2 is a like view of a tube, containing the device, applicable to a bottle-neck. Fig. 3 is a top view of the guard. Fig. 4 is a bottom view thereof. Fig. 5 is a vertical section thereof in the plane indicated by the dotted line *x x* in Fig. 3. Fig. 5^a is an enlarged view of Fig. 5, showing the groove or notch in the rim. Fig. 6 is a vertical section in the plane indicated by the dotted line *y y* in Fig. 3, and Fig. 7 is a modified form of the guard.

1 represents the upper section of a bottle-neck; 1', the lower section thereof. These parts are united by any known means, such as internal and external screw-threads engaging each other, or external screw-threads and a nut, or by segments of screw-threads interlocking with each other, and, when assembled for use, cemented together. An internal circumferential groove 2 is formed between the two parts. The rim 3 of the guard 4 is placed in the said groove 2 before the parts 1 and 1' are secured to each other. The guard 4 is formed with a stem 5, connecting it with the ring 6, and bearing upon the lower end a cup

8, having a point or downward projection 10, the function of which is to limit the opening movement of the valve 11 from the seat 12. The guard 4 is preferably formed of glass, 55 porcelain, or chinaware, but may be made of metal, and should preferably be formed integrally. The ring 6 is conical on both the inner and outer sides, and is, as shown, of such inclination and relative dimensions to the cup 8 that any object thrust into the cup 8 through the ring 6 is arrested, if rigid, and if flexible is bent upward. The valve 11 is guided to and from its seat 12 by guides or ribs projecting inwardly in the part of the neck 1' or tube, 65 so that the valve is always in concentric position with the axis of the valve-seat, and a clear passage for egress of fluid and ingress of air is afforded on all sides of the valve when the valve is open, which occurs whenever it is horizontal or slightly deflected therefrom in position for pouring. Notches or grooves 14 are formed in the edge and the upper and lower sides of the rim of the guard 4, of less depth at the center than the groove 2, 75 as shown in Fig. 5^a, which provide a circuitous passage for the entrance of air in emptying the bottle, but do not permit of the introduction of any wire or other implement to reach and unseat the valve 11. The valve 11, 80 being guided centrally when open as well as when closed, cannot be unseated by inclining the bottle into or above a horizontal position. The guard in this device differs from that in the patent above referred to in substituting 85 a hollow cup 8 for the button, and the mode of securing the guard in the neck of the bottle or tube, and in the conical external form of the guard; also in providing a projection 10 on the lower end of the cup 8, which prevents the fouling of the valve by introducing adhesive liquid through the guard, and in the notches 14 in the rim forming a circuitous passage through the groove 2, which, while it prevents interference with the valve, serves 95 to admit air in emptying the bottle.

Having described my invention, what I claim is—

1. In a device for preventing the clandestine refilling of bottles, a guard notched at its upper and outer edge to provide circuitous air-vents therein and having an exterior in-

5 verted conical form, and an internal inverted conical form, a cup formed integrally therewith, and adapted to prevent the undetected opening of a valve in a bottle-neck, and the ingress of liquid thereto, substantially as described.

10 2. In a device for preventing the clandestine refilling of bottles, a bottle-neck, or sleeve adapted to be inserted in a bottle-neck, formed of two parts, having when assembled an internal circumferential groove, means of uniting the two parts, a valve-seat in one part, a valve fitted to close said seat, guides arranged to support said valve, when opened, in axial line with said seat, in combination with a guard having a notched edge, adapted to hold in said circumferential groove and to provide circuitous air-vents therein, a cup formed in-

tegrally with said guard, and a downward projection adapted to limit the opening motion of said valve, constructed and arranged to operate substantially as set forth. 20

3. As an article of manufacture, a guard for preventing the clandestine opening of valves for ingress of liquid to bottles, comprising a ring notched at its upper and outer edge to provide circuitous air-vents therein and having external and internal conical surfaces, and a cup of greater diameter than the smaller opening in said ring formed integrally therewith as described and shown, as and for the purpose set forth. 25 30

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Witnesses:

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